



1. Identification

Product name : Sarnacol® AD Feltback Membrane Adhesive Part 1

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Recommended use of the chemical and restrictions on use : For further information, refer to product data sheet.

2. Hazards identification

GHS Classification

Acute toxicity, Category 4 (Inhalation)	H332: Harmful if inhaled.
Skin irritation, Category 2	H315: Causes skin irritation.
Eye irritation, Category 2A	H319: Causes serious eye irritation.
Respiratory sensitization, Category 1	H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Skin sensitization, Category 1	H317: May cause an allergic skin reaction.
Specific target organ systemic toxicity - single exposure, Category 3, Respiratory system	H335: May cause respiratory irritation.
Specific target organ systemic toxicity - repeated exposure, Category 2 (Inhalation)	H373: May cause damage to organs through prolonged or repeated exposure if inhaled.

GHS label elements

Hazard pictograms :

Signal Word : Danger

Hazard Statements : H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.



H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
 H335 May cause respiratory irritation.
 H373 May cause damage to organs through prolonged or repeated exposure if inhaled.

Precautionary Statements

Prevention:
 P260 Do not breathe dust/ fume/ gas/ mist/ vapors/ spray.
 P264 Wash skin thoroughly after handling.
 P271 Use only outdoors or in a well-ventilated area.
 P272 Contaminated work clothing must not be allowed out of the workplace.
 P280 Wear protective gloves/ eye protection/ face protection.
 P285 In case of inadequate ventilation wear respiratory protection.
Response:
 P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
 P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
 P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
 P337 + P313 If eye irritation persists: Get medical advice/ attention.
 P342 + P311 If experiencing respiratory symptoms: Call a POISON CENTER/doctor.
 P362 Take off contaminated clothing and wash before reuse.
Storage:
 P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
 P405 Store locked up.
Disposal:
 P501 Dispose of contents/ container to an approved waste disposal plant.

See Section 11 for more detailed information on health effects and symptoms.
 There are no hazards not otherwise classified that have been identified during the classification process.
 There are no ingredients with unknown acute toxicity used in a mixture at a concentration $\geq 1\%$.

3. Composition/information on ingredients

Hazardous ingredients

Chemical name	CAS-No.	Concentration (%)
Diphenylmethanediisocyanate, isomeres and homologues	9016-87-9	$\geq 50 - \leq 100 \%$
4,4'-methylenediphenyl diisocyanate	101-68-8	$\geq 25 - < 50 \%$
methylenediphenyl diisocyanate	26447-40-5	$\geq 2.5 - < 10 \%$



There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

4. First aid measures

- | | | |
|---|---|--|
| If inhaled | : | Move to fresh air.
Consult a physician after significant exposure. |
| In case of skin contact | : | Take off contaminated clothing and shoes immediately.
Wash off with soap and plenty of water.
If symptoms persist, call a physician. |
| In case of eye contact | : | Immediately flush eye(s) with plenty of water.
Remove contact lenses.
Keep eye wide open while rinsing.
If eye irritation persists, consult a specialist. |
| If swallowed | : | Clean mouth with water and drink afterwards plenty of water.
Do not induce vomiting without medical advice.
Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.
Obtain medical attention. |
| Most important symptoms and effects, both acute and delayed | : | irritant effects
sensitizing effects

Asthmatic appearance
Cough
Respiratory disorder
Allergic reactions
Excessive lachrymation
Erythema
Headache
Dermatitis
See Section 11 for more detailed information on health effects and symptoms.

Causes skin irritation.
May cause an allergic skin reaction.
Causes serious eye irritation.
Harmful if inhaled.
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
May cause respiratory irritation.
May cause damage to organs through prolonged or repeated exposure if inhaled. |
| Protection of first-aiders | : | Move out of dangerous area.
Consult a physician.
Show this material safety data sheet to the doctor in attendance. |
| Notes to physician | : | Treat symptomatically. |



5. Fire-fighting measures

- Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

- Specific extinguishing methods : Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

- Special protective equipment for fire-fighters : In the event of fire, wear self-contained breathing apparatus.

6. Accidental release measures

- Personal precautions, protective equipment and emergency procedures : Use personal protective equipment. Deny access to unprotected persons.
- Environmental precautions : Do not flush into surface water or sanitary sewer system. If the product contaminates rivers and lakes or drains inform respective authorities. Local authorities should be advised if significant spillages cannot be contained.

- Methods and materials for containment and cleaning up : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Keep in suitable, closed containers for disposal.

7. Handling and storage

- Advice on safe handling : Avoid formation of aerosol. Avoid exceeding the given occupational exposure limits (see section 8). Do not get in eyes, on skin, or on clothing. For personal protection see section 8. Persons with a history of skin sensitization problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used. Smoking, eating and drinking should be prohibited in the application area. Provide sufficient air exchange and/or exhaust in work rooms. Follow standard hygiene measures when handling chemical products.

- Conditions for safe storage : Store in original container. Keep in a well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Observe label precautions. Store in accordance with local regulations.

- Materials to avoid : No data available, Amines, Alkali metals, Alcohol, Ammonium



salts, Incompatible with acids and bases., Incompatible with oxidizing agents., Polypropylene, Water-reactive substances

8. Exposure controls/personal protection

Component	CAS-No.	Basis **	Value	Exposure limit(s)* / Form of exposure
4,4'-methylenediphenyl diisocyanate	101-68-8	ACGIH	TWA	0.005 ppm
		OSHA Z-1	C	0.02 ppm 0.2 mg/m3
		OSHA P0	C	0.02 ppm 0.2 mg/m3
		CAL PEL	PEL	0.005 ppm 0.051 mg/m3
		NIOSH REL	TWA	0.005 ppm 0.05 mg/m3
		NIOSH REL	C	0.02 ppm 0.2 mg/m3

*The above mentioned values are in accordance with the legislation in effect at the date of the release of this safety data sheet.

****Basis**

- ACGIH. Threshold Limit Values (TLV)
- OSHA P0. Table Z-1, Limit for Air Contaminat (1989 Vacated Values)
- OSHA P1. Permissible Exposure Limits (PEL), Table Z-1, Limit for Air Contaminant
- OSHA P2. Permissible Exposure Limits (PEL), Table Z-2
- OSHA Z3. Table Z-3, Mineral Dust

Engineering measures : Use of adequate ventilation should be sufficient to control worker exposure to airborne contaminants. If the use of this product generates dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure below any recommended or statutory limits.

Personal protective equipment

Respiratory protection : Use a properly fitted NIOSH approved air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary.

The filter class for the respirator must be suitable for the maximum expected contaminant concentration (gas/vapor/aerosol/particulates) that may arise when handling the product. If this concentration is exceeded, self-contained breathing apparatus must be used.



- Hand protection
Remarks : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
- Eye protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary.
- Skin and body protection : Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place.
- Hygiene measures : Avoid contact with skin, eyes and clothing.
Wash hands before breaks and immediately after handling the product.
Remove contaminated clothing and protective equipment before entering eating areas.
Wash thoroughly after handling.

9. Physical and chemical properties

- Appearance : liquid
- Color : dark amber
- Odor : characteristic
- Odor Threshold : No data available
- Flash point : ca. 428 °F (220 °C)
- Autoignition temperature : 482 °F (250 °C)
- Decomposition temperature : No data available
- Lower explosion limit (Vol%) : No data available
- Upper explosion limit (Vol%) : No data available
- Flammability (solid, gas) : No data available
- Oxidizing properties : No data available
- pH : Note: Not applicable
- Melting point/range / Freezing point : No data available
- Boiling point/boiling range : 392 °F (200 °C)
- Vapor pressure : 0.01 mmHg (0.01 hpa)
- Density : ca.1.22 g/cm³
at 73 °F (23 °C)



Water solubility	:	Note: immiscible
Partition coefficient: n-octanol/water	:	No data available
Viscosity, dynamic	:	200 mPa.s at 68 °F (20 °C)
Viscosity, kinematic	:	No data available
Relative vapor density	:	No data available
Evaporation rate	:	No data available
Burning rate	:	No data available
Volatile organic compounds (VOC) content	:	32 g/l A+B Combined

10. Stability and reactivity

Reactivity	:	No dangerous reaction known under conditions of normal use.
Chemical stability	:	Contact with moisture, other materials that react with isocyanates, or temperatures above 350F (177C), may cause polymerization.
Possibility of hazardous reactions	:	Violent reaction with water at high temperature. May produce violent reactions with bases and numerous organic substances including alcohols and amines. MDI reacts slowly with water to form Carbon Dioxide gas. This gas can cause sealed containers to expand and possibly rupture.
Conditions to avoid	:	Exposure to high temperatures and moisture.
Incompatible materials	:	Reacts with amines, caustic alkali solutions, alcohols, ammonia, oxidizers, acids, polyols. Reacts with water forming carbon dioxide-may rupture sealed containers if contaminated with water. May produce violent reactions with bases and numerous organic substances including alcohols and amines.
Hazardous decomposition products	:	Carbon dioxide, carbon monoxide, oxides of nitrogen, dense black smoke, hydrogen cyanide, isocyanic acid, other undetermined compounds.

11. Toxicological information

Acute toxicity

Harmful if inhaled.

Ingredients:

Diphenylmethanediisocyanate, isomeres and homologues:



- Acute oral toxicity : LD50 Oral (Rat): > 10,000 mg/kg
- Acute inhalation toxicity : Acute toxicity estimate: 1.5 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: Expert judgment
- Acute dermal toxicity : LD50 Dermal (Rabbit): > 9,400 mg/kg

4,4'-methylenediphenyl diisocyanate:

- Acute inhalation toxicity : Acute toxicity estimate: 1.5 mg/l
Test atmosphere: dust/mist
Method: Expert judgment

Skin corrosion/irritation

Causes skin irritation.

Serious eye damage/eye irritation

Causes serious eye irritation.

Respiratory or skin sensitization

Skin sensitization: May cause an allergic skin reaction.

Respiratory sensitization: May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Germ cell mutagenicity

Not classified based on available information.

Carcinogenicity

Not classified based on available information.

IARC Not applicable

NTP Not applicable

Reproductive toxicity

Not classified based on available information.

STOT-single exposure

May cause respiratory irritation.

STOT-repeated exposure

May cause damage to organs through prolonged or repeated exposure if inhaled.

Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

Aspiration toxicity

Not classified based on available information.

12. Ecological information

- Other information Do not empty into drains; dispose of this material and its container in a safe way.
Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.



13. Disposal considerations

Disposal methods

- Waste from residues : Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements.
- Contaminated packaging : Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

DOT

Not dangerous goods

IATA

Not dangerous goods

IMDG

Not dangerous goods

Special precautions for user

No data available

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

15. Regulatory information

- TSCA list** : All chemical substances in this product are either listed on the TSCA Inventory or are in compliance with a TSCA Inventory exemption.

EPCRA - Emergency Planning and Community Right-to-Know

CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

SARA304 Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

- SARA 311/312 Hazards** : Acute Health Hazard
Chronic Health Hazard

- SARA 302** : No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.



SARA 313 : The following components are subject to reporting levels established by SARA Title III, Section 313:

Diphenylmethanediisocyanate, isomeres and homologues	9016-87-9	50 - 100 %
4,4'-methylenediphenyl diisocyanate	101-68-8	25 - 25 %

Clean Air Act

Ozone-Depletion Potential This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

The following chemical(s) are listed as HAP under the U.S. Clean Air Act, Section 12 (40 CFR 61):

4,4'-methylenediphenyl diisocyanate	101-68-8	25 - 50 %
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This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

California Prop 65 This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

16. Other information

HMIS Classification

Health	*	3
Flammability		1
Physical Hazard		1
Personal Protection		X

Caution: HMIS® rating is based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® rating is not required on SDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® rating is to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). Please note HMIS® attempts to convey full health warning information to all employees.

Notes to Reader

The information contained in this Safety Data Sheet applies only to the actual Sika Corporation ("Sika") product identified and described herein. This information is not intended to address, nor does it address the use or application of the identified Sika product in combination with any other material, product or process. All of the information set forth herein is based on technical data regarding the identified product that Sika believes to be reliable as of the date hereof. Prior to each use of any Sika product, the user must always read and follow the warnings and instructions on the product's current Product Data Sheet, product label and Safety Data Sheet for each Sika product, which are available at web site and/or telephone number listed in Section 1 of this SDS.

Sarnacol® AD Feltback Membrane Adhesive Part 1



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